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ABSTRACT

The experiences with ERIC which are profiled for three public school systems reflect specific user requirements in different environments. In "Meeting Professional Education Information Needs: A Profile of How the Alexandria, Virginia City Public Schools Use the ERIC System," Dale Brown discusses the types of searches used by administrators and teachers at the city school system level. Patricia Mautino, in "Watch ERIC Grow!" describes three levels of ERIC use in New York State, through the Educational Programs and Studies Information Service (EPSIS), which provides state-wide support, the Board of Cooperative Educational Services (BOCES) at the county level, and individual user services at the school level. The use of microforms at East Detroit High School is discussed in Lewis Saks' article, "The Little Grey Cells, The Little Black Cards: An Approach to ERIC Microfiche," as well as a recent study done by Pat Gilmore which surveyed the use and knowledge of ERIC by teachers in the East Detroit School system. (RAO)

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ELEMENTARY AND SECONDARY

TEACHERS USE ERIC

by

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Syracuse University
1978

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PREFACE

One of the original purposes of ERIC was to provide information on new developments in education to practitioners in the field.

Since the largest number of practitioners, the corps of teachers, is often forgotten in the education milieu, we at ERIC/IR searched for cases of teachers using ERIC in order to reassure ourselves that they are indeed using this resource--and the kinds of information they seek. We also want to demonstrate to others that teachers find ERIC to be a valuable source of information.

In each of the three cases described in this volume, there is a knowledgeable and dynamic person behind the use of ERIC. Dale Brown, Pat Mautino, and Lew Saks are dedicated media professionals who carry the ERIC message to their colleagues.

Donald P. Ely
Director, ERIC/IR
Syracuse University
December 11, 1978

MEETING PROFESSIONAL EDUCATION INFORMATION NEEDS: A PROFILE OF HOW THE ALEXANDRIA, VIRGINIA CITY PUBLIC SCHOOLS USE THE ERIC SYSTEM

Dale W. Brown
Specialist
Library and Media Services

A small suite of rooms located in the T. C. Williams Senior High School building plays a vital role in the day-to-day operation of the Alexandria, Virginia City Public Schools. Here is located the collection of the Nichols Memorial Professional Library, a division of the system-level Educational Media Center. This library, dedicated to the memory of a former Director of Instruction who was particularly sensitive to the information needs of staff members, consists of over 6,000 volumes in education and related fields. It receives on a regular basis more than 150 journals listed in Education Index and the Current Index to Journals in Education (CIJE). In addition to CIJE, the library subscribes to Resources in Education (RIE), a monthly abstract journal announcing the recent literature related to the field of education, which permits an early identification of reports of particular interest to our staff and faculty. Most importantly, the library receives automatically microfiche copies of all Educational Resources Information Center (ERIC) reports announced in each issue in Resources in Education. The school system is able, through this subscription, to make available more than 115,000 research documents on one wall of a comparatively small room.

While the Alexandria City Public Schools is not the only school system providing such information sources, it is unusual to find this level of commitment to research information existing in a relatively small system such as this one, with eleven elementary and six secondary schools.

To understand the present, it is useful to view the past at least briefly to gain some perspective. That past is distinctly visible in Alexandria and impacts upon the city and its school system.

Situated just below Washington, D. C. on the banks of the Potomac, the historic city of Alexandria, Virginia might be viewed as a microcosm of American life and culture. It further reflects the impact of urbanization and social change which have reshaped American life in the present generation.

Founded in 1749 by an act of the Colonial House of Burgesses, Alexandria became very early a flourishing seaport and trade center, and it can legitimately claim to be one of the nation's most historic cities. The original town site along the Potomac is now designated as Old Town, and is carefully preserved as an historic district. The city is, however, a thriving residential and business area, with hundreds of buildings remaining from the Colonial and Federal periods. While this link with the past still gives the city much of its unique character, it is far from being a museum of American history. It has continued to develop, and today Alexandria is a dynamic city of approximately 115,000 people whose employment and interests are intertwined with the Federal Government, the Pentagon, and other nearby military installations. It is experiencing many of the problems common to other cities, and today reflects more urban than suburban characteristics.

Its population reflects a racial and ethnic diversity; environmental problems impinge from land, water, and air. Its transportation needs are being addressed in part by the construction of the new Metro subway system which will have a line running diagonally across the city providing three passenger stations giving quick access to the larger metropolitan area. Alexandria has been voted an "All American" city, and today continues as a progressive city firmly committed to providing a viable future for all its citizens.

Development of the School System

The Alexandria City Public Schools traces its history back through many antecedents to the present. Early in the development of the town, Quaker schoolmasters became a part of the local scene, offering educational opportunities to those families who could provide tuition fees. Later the Alexandria Academy was founded with George Washington as an original trustee. The school was endowed to provide free education to those students who could not otherwise afford it. That eighteenth century building still stands on the grounds of the central administrative offices, and is used by the department of instruction. It was in this same building that Robert E. Lee received his primary education.

Later a Lancastrian School was built, and this was followed by the Washington School, built prior to the Civil War. This latter building now serves as the Administrative building for the school system, and the cornerstone of the Lancastrian School is embedded in its walls.

Public education did not become a widespread reality in Virginia until after the Civil War when a new constitution for the state mandated a program of free public education. A dual system of schools

began to evolve during this era; one for black children and one for white. This dual system would continue until 1954 and the Supreme Court decision ending segregation in public schools. Within Alexandria a totally separate educational system had evolved for black pupils. Following a period of resistance throughout the state, a program of compliance began and Virginia school systems moved toward fully integrated systems.

In 1964 Dr. John C. Albohm became Superintendent of Schools in Alexandria. During his administration the school system was totally restructured and integrated, with all vestiges of the old dual system being totally removed.

The most constant variable in the past decade has been adaptation to change, and in this regard the Alexandria City Public Schools have not escaped the trend. During this period the school system has organized middle schools, restructured the secondary schools to provide for racial balance by developing two 9-10th grade schools, and one 11-12th grade senior high school, reorganized the elementary schools to achieve a completely integrated system which is currently comprised of 47 per cent black, 45 per cent white, and 8 per cent other ethnic students.

Following the revision and adoption of a new state constitution, more specific goals for the school systems have been mandated throughout the Commonwealth of Virginia. These Standards of Quality are revised periodically, and the several school systems are now in the process of implementing the Standards as enacted by the General Assembly for the 1978-80 Biennium.

Through mandated changes and local initiative, the schools continue to reflect societal priorities. More recent developments have included an emphasis on career education, and the construction of a new career center at the Senior High School. Title IX, as well as the enactment of legislation relating to special education, has generated continuing change and curricular revision. During Dr. Albohm's superintendency, all schools were accredited, elementary and secondary, by the State, as well as the Southern Association of Colleges and Schools.

In 1977 Dr. John L. Bristol became Superintendent of Schools. His administration has placed an emphasis on documenting the curriculum, applying management techniques, responding to declining enrollment by school consolidation, improving buildings and grounds, placing emphasis on discipline and more structured programs, as well as moving toward competency based education. With a current enrollment of just over 12,000 students, a sound tax base, a well-trained staff, and a citizenry with heightened expectations, the School Board is determined that the Alexandria City Public Schools can provide a sound education for all students, and is dedicated to that effort.

Library and Information Services for the School System

Library and information services to faculty and students in the Alexandria City Public Schools are provided through a complete Library Media Center in each building, and the Educational Media Center at the system level. Information and instructional resources appropriate to the curriculum and learner needs are provided at the building level, including instructional television and video capability. In-depth collections, many meeting national standards, are accessible to all

students. All centers have professional and supporting staff personnel ranging from two to six persons.

The Educational Media Center serves to link together all of the centers into an information network, providing for interschool and interlibrary loan, as well as providing an interface with the libraries, information agencies, and cultural sources outside the school system. The 16mm film collection, media production, and professional information resources (provided through the Nichols Memorial Professional Library) are also organized and administered at the system level.

Alexandria City Public Schools is a member of the Metropolitan Washington Library Council, and the Specialist for Library and Media Services, a former member of the executive board, now serves on the Librarian's Committee of this organization. He is also a member of the Consortium for Continuing Higher Education in Northern Virginia's Librarians Networking Committee. Through these connections, the Library Media and Information Services of the Alexandria City Public Schools are linked to the larger library and information community comprised of college, university, government, special, public, community college and school libraries. This linkage provides a mechanism for inter-library loan and resource sharing, assuring users of the Alexandria City Public Schools Library Media Centers that the information resources of the region are also accessible through networking. The Consortium Library Networking Committee this Spring sponsored a series of workshops on resource sharing which were attended by college, university, community college, public, special and school librarians. One of the special subject areas evaluated was education.

Out of this cooperative effort, a guide to resource sharing was produced which opened up new points of access for users, including a broader expanse of the regional ERIC resources.

As a member of the Council of Governments Metropolitan Washington Library Council, the Alexandria City Public Schools Educational Media has a direct stake in a proposal for a regional bibliographic center, and has hopes of a terminal in Alexandria to be utilized by the Alexandria Library, the Alexandria City Public Schools, and the Northern Virginia Community College as a part of this project. This would give us both on-line and off-line access to all the major data bases including all ERIC documents. The alternative to this is a telephone connection to the bibliographic center with a trained staff person initiating off-line searches for our faculty and staff.

ERIC in Alexandria

Since the Alexandria City Public Schools first subscribed to the total ERIC documents collection in January 1971, Mrs. Julie Lando, the on-site administrator, has been active in the promotion of ERIC resources. Keenly aware of the potential in the ERIC collection, she has worked with the Specialist in Libraries and Media, who has overall responsibility in program development, to formulate dissemination efforts and increase utilization.

Workshops have been held during staff development to acquaint teachers and administrators with the ERIC resources and the ways to use the collection. These workshops have included audio-visual presentations as well as participant activity. Presentations have also been made to the Alexandria School Board regarding ERIC and other professional

education information sources available in the system. The filmstrip tape, ERIC: What it is, How to Use It, has been useful in these presentations.

Like their colleagues in other school systems, the teachers and administrators of the Alexandria City Public Schools operate daily on "the cutting-edge" where theory must be translated into practice, and research must be applied to achieve practical solutions to day-to-day problems. The Educational Media Center, through the professional library, has attempted to meet user needs for research findings and to publicize this access as widely as possible. The process is one of locating-research, interpreting-and-analyzing-research, synthesizing-research, and finally applying-or-utilizing-research. The addition of Dr. James P. Akin to the system-level staff will greatly facilitate this analysis-synthesis process in institutional studies since he is charged with responsibility for special research projects.

At the outset, the major contribution of ERIC is in locating research. Manual searches are done through utilization of RIE, CIJE, and the ERIC descriptors. Two kinds of utilization take place: first, institutional requests from the Superintendent, Division of Instruction, Curriculum Specialists or other administrative personnel are done by the library staff. Individual searches for course work and other needs are carried out by the user with assistance as needed.

Microfiche readers are available at the Nichols Library for use. A microfiche reader-printer is also utilized to convert short reports or portions of documents to hard copy. If a hard copy of a full document is required, the library will order it at cost from the Document Reproduction Service. Since the service is located in nearby Arlington,

Virginia the turn-around time is relatively short. The library also circulates microfiche to users within the system, and provides portable microfiche readers for their use. This has proved especially beneficial to users completing term papers, theses, dissertations, and other research projects, since it allows the user to pursue the research effort on an intensive basis at home or at another site where he has gathered pertinent materials. This library is one of the few in the region which allows this type of circulation.

Personnel within the school system who need extensive searches of the ERIC data base are accommodated according to their particular needs. If a manual search is not sufficient, teachers and administrators who are enrolled in continuing or graduate education courses at George Mason University, Virginia Polytechnic Institute and State University, or the University of Virginia, as well as institutions of higher education in the District of Columbia and Maryland, are referred to the appropriate librarian of these institutions for a complete on-line supply of information or an off-line print-out of references to documents, journal articles, or books germane to the subject being researched. All of these institutions provide full access to ERIC documents, and maintain computer access to data banks containing ERIC. Some institutions absorb the cost of this service, while others operate on a fee basis, prorated according to the computer time utilized or the print-out generated. For searches required for "in-house" use relating to studies being undertaken by the Division of Instruction or other offices within the school system, the Nichols Library contacts the State Department of Education for a complete search of the data base on particular topics. These are supplied off-line, and allow the user to evaluate the sources which may be useful to the research effort.

Services and Tools for User Research

The key element in the effective utilization of professional education information resources such as ERIC has been the Current Awareness Program maintained by the Nicho s Professional Library. Each September every teacher and administrator in the system is provided with a user interest profile. Staff members are requested to check a pre-formulated list of topics which pertain to their areas of responsibility and for which they would like to receive information on a regular basis. This year's profile contains entries such as "Graduation Requirements," "Competency Based Education," and "Mainstreaming-Special Education Students." Users may also identify other subjects in which they have a particular interest. Based on these profiles, publication and information sources are reviewed on a regular basis, and appropriate source materials are directed to users according to request.

Curriculum Specialists and other Administrators receive each month a photocopy of the Document Resource section of RIE which is pertinent to their area of expertise or responsibility. This process alerts them to research documents contained in the microfiche collection. They can keep abreast of their field and have immediate access to new research studies through this assistance. On site use is encouraged but materials will be forwarded by daily courier service for office or home use as needed. The Table of Contents pages of all major journals received by the library are also photocopied and circulated through the system to individuals and Library Media Centers as a means of disseminating current information. Copy service is provided

to reproduce articles as requested by individual teachers or administrators within copyright regulations. In addition, new book acquisitions are publicized and bibliographies circulated.

In addition to these efforts, the Nichols Professional Library provides the following research tools to assist users: Directory of ERIC Microfiche Collections; Thesaurus of ERIC Descriptors, 7th.ed; ERIC Educational Documents (RIE) Abstracts; ERIC Educational Documents Index-Institutions - 1966-1971; Title Index ERIC ED Accessions File; Complete Guide and Index to ERIC Reports; Educators Complete ERIC Handbook. ERIC Subject Bibliographies produced by the various clearinghouses are also in the library.

Utilization of ERIC Resources

For a system of this size the awareness of ERIC resources is extensive and utilization significant. Some examples of day-to-day practical application of the ERIC system to local needs might illustrate how research does provide assistance in day-to-day problem solving at the system level where the needs are acutely felt. Jack Henes, the Social Studies Curriculum Specialist, recently returned from an extended educational leave at the University of Colorado at Boulder where the ERIC Clearinghouse for Social Studies/Social Science Education is located. Here are collected the research documents relating to all levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

During the current academic year an assessment of the total Social Studies Program will be taking place, with textbook adoptions a part of the total process. The ERIC collection will be searched to locate information which will assist in implementing the Virginia Standards of Quality as they relate to this discipline. The literature will be searched for assistance in teaching basic mapping skills Grades 1-6, for new curriculum projects relating to the teaching of the American economic system, and new directions in the teaching of United States History.

William Dunkum, who has spearheaded the effort to provide a high calibre of mathematics and science instruction throughout the system, and has sent many students on to Massachusetts Institute of Technology and other advanced programs, stated that the ERIC system has meant "that I can feel that I am current in the literature related to my areas of interest; and that I am not missing out on new developments." He adds that "I have been able to do more thorough researching than a simple journal search provides, since much of the material in education is ephemeral in nature.

...Most importantly, I am able to do the research in house. The microfiche format means that I can have access to far more material than I could get to if the materials were in printed form. I can keep almost all of the 100 critical references in a card file box." He concludes by saying that "the ERIC system is an essential support to my efforts at improving both myself and the school system."

Roberta New, one of the school psychologists at the system level, stated that she "found the ERIC system invaluable when doing research before designing the selection procedures for an elementary program

for gifted and talented students. A tremendous amount of information was available in a concise format." The Alexandria City Public Schools recently concluded a three-year federally funded project for the academically talented, and has continued the program under local support. The reports for this project funded by Title III and IV-C are included in the ERIC collection.

Sue Sund, a middle school teacher and chairperson of the Learner Effectiveness in School (LEIS) Program, found the ERIC resources so useful that she purchased her own portable microfiche reader. She stated that the ease and accessibility, coupled with quickness of service and vastness of information, made in-depth study possible. Her work has been related to students who are not performing well in the regular classroom and who require additional assistance. She has pursued ERIC searches in Discipline, Truancy, Remedial Reading, and related topics.

The Assistant Superintendent for Elementary and Secondary Education, Dr. Donald E. Dearborn, has been involved in educational program design and implementation in Alexandria for a number of years. He identified several areas where ERIC research documents had played a role in the decision-making process. Minimum competencies, graduation requirements, and testing have current emphasis; instructional systems and patterns of school organization were evaluated in the past in relation to Alexandria's needs.

Mr. Richard B. Hills, Assistant to the Superintendent for Curriculum and Instruction, has been a consistent user of the ERIC system since its inception. He stated that materials from ERIC had been utilized in formulating the proposal for the Design Exploration

for Gifted Elementary Students Program, as well as other research projects currently in the planning stage. A portable microfiche reader is a basic part of his information gathering system, and he utilizes it regularly at the office as well as at home.

In addition to regular staff use, some high school classes at the eleventh and twelfth grade levels also utilize ERIC materials; in particular, the psychology classes are required to do a research report that often incorporates materials from the Nichols Library collection.

The Nichols Memorial Professional Library is open to users outside the system, and for community use particularly on-site. One of the officers from nearby Ft. Belvoir utilized the ERIC collection extensively as he worked on preparing training materials for armed service educational programs. A recent request forwarded through the Alexandria Library reference department related to the location of appropriate materials for adults reading below fourth grade level. Useful citations were found in ERIC, and the project for the local Literacy Council was advanced.

During the 1977-78 academic year 147 special in-depth searches of the ERIC system were made. Approximately one-third of these searches were for central office administrators, principals, curriculum specialists, or school board members. The remainder were principally done by individual teachers engaged in graduate study.

Future plans within the library call for continuation of present efforts, expansion of curricular resources, acquisition of portable microfiche readers in each building, and consideration of a microfiche duplicating machine. If the goal of computer access on-site is realized, this library will have provided the ultimate information access for its patrons.

During the current academic year, the Alexandria City Public Schools face many decisions which will affect the shape of the future. At its recent working session, the School Board set a timetable for decision making relating to school organization, instructional programs, and evaluation procedures. In the data gathering phase, the resources of the Nichols Memorial Professional Library, and the ERIC system in particular, will be heavily utilized to locate background information, develop position papers, and meet basic information needs. Since the quality of decision making is often related to information access, the Alexandria City Public Schools remain committed to providing adequate information sources to meet the needs of its faculty and staff. The ERIC system will continue to play a vital role in accessing research information at the point where it is vitally needed, at the action level where theory is translated into practice; where information shapes program. The Alexandria City Public Schools offer ample evidence that the ERIC resources are making a significant contribution to the improvement of instructional programs for the learner in the classroom.

WATCH ERIC GROW!

Patricia Mautino
Director, Curriculum Resources Center
Oswego County Board of Cooperative
Educational Services (BOCES)

To those of us who have been promoting the virtues of ERIC over the past decade, it seems as if ERIC has been around forever. To still be faced with the teacher's comment "Eric? Why, he's doing much better in reading this term," seems impossible--yet, therein is the reality of the problem. That is, spreading the word about this marvelous and unique system of educational research to the practitioner has been slow, evolutionary and may be never-ending.

The nucleus of the problem, I think, stems from two basic facts:

1. Elementary and secondary educators are not naturally research-oriented in their techniques for problem-solving; and
2. Most schools place little emphasis on making easily accessible such materials and data bases like ERIC.

Thus, to champion the use of ERIC requires, in part, to be willing to change behaviors and thinking. It is not enough to merely make the system available, for contrary to one's expectations, the client will hardly overwhelm you with use.

In New York State planned, continuous efforts to make educators aware of ERIC have been underway. Further, easy mechanisms for delivering the service have been devised and increasingly promoted. The purpose of this paper will be three-fold:

1. To discuss the approach for service, support and promotion at the state level;
2. To relate one area's program for regional service which connects the local user with the above state level system;
3. To provide information about ERIC users and purposes of use.

PART I. State-Level Service.

Within the State Education Department in Albany, there exists a unit called Educational Programs and Studies Information Service, or EPSIS.

Quoting from a recent EPSIS communique, the following background is useful:

> The Educational Programs and Studies Information Service (EPSIS) was formed as a separate unit of the State Education Department (SED) in 1972 to both coordinate the fragmented approach to dissemination of program information and to provide educators with a single SED access point for research and program information inquiries. Since that date, EPSIS has continued to expand both its range of services and the number of educators that it reaches. During 1977 EPSIS performed over 2500 computer searches and responded to more than 5,500 requests for 15,000 abstracts and 30,000 microfiche. Over 90 per cent of the information provided was to meet local district needs.
>
> In addition to providing access to the materials in the Educational Resources Information Center (ERIC) file, EPSIS is building a computerized program and information file unique to the needs of New York educators and to SED program management personnel. This activity is currently supported by a National Institute of Education state capacity building grant. Over 3,000 items of information on ESEA Title I, IV-B, IV-C, PSEN, P.L. 89-313, and EHA Title VI-B programs as well as data on teacher developed materials, local programs, unpublished tests and education legislation have been entered in the file. Each year additional material will be acquired and entered.

The above information clearly sets the commitment of New York's State Education Department to supporting the research and program needs of the schools, higher education and the profession. In line with this commitment the state, through EPSIS, offers special services for ERIC.

First of all, EPSIS leadership has been provided toward establishing regional-level ERIC network functions. The Boards of Cooperative Educational Services (BOCES)[1], of which there are 44 in the state, serve as regional access points. In addition, the five largest cities of the state (Buffalo, New York, Rochester, Syracuse and Yonkers) provide a similar function for their constituents. The selection of BOCES as ERIC service centers is logical, since they are well-established as functional units for other regional services. Also, the BOCES have demonstrated themselves to be cost-effective and efficient in this role.

In order to make the service to the client effective and timely, EPSIS has defined the BOCES, or liaison, role and has provided information regarding the benefits accrued by BOCES via the EPSIS responsibilities. That material follows:

DUTIES AND FUNCTIONS OF EPSIS LIAISONS

A. General

1. To serve as a link between the EPSIS unit and local educational agency personnel.

2. To assist local educational agency personnel in defining their information needs, and in processing the necessary paperwork for forwarding information requests to EPSIS.

3. To publicize EPSIS services within the designated service region.

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[1]Please see Appendix for description of BOCES.

B. Specific (training to be provided by EPSIS)

1. To be available for assisting local educational agency personnel in preparing statements of their information needs.

2. To assist LEA personnel in choosing appropriate ERIC descriptors and Boolean logic operators for conducting a computer search.

3. To provide LEA personnel with instructions for ordering ERIC source documents.

4. To maintain a collection of EPSIS bibliographies and other resource materials for LEA personnel access.

5. To prepare newsletter items for local district newsletters on the availability of EPSIS services.

6. To make presentations to local curriculum committees and others on the process for making information requests to EPSIS.

RECOMMENDED QUALIFICATIONS

A. That the liaison be a full-time, professional BOCES employee with sufficient time to conduct liaisons activities.

B. That the liaison be available and readily accessible to personnel throughout the BOCES region.

C. That the liaison be physically located with the local ERIC collection (if one exists) and with other BOCES information resources.

D. That the liaison have ongoing contact with all levels of BOCES and LEA personnel.

E. On a personal level, liaisons should be good listeners, able to communicate well, and have the ability to define the parameters of a problem.

BENEFITS TO PARTICIPATING BOCES

A. Unlimited ERIC computer searches (costs absorbed by the EPSIS office at approximately $10.00 per search). Available through other vendors in New York State, searches cost between $15.00 and $30.00 per search and are billed to the client.

B. Free microfiche copies of any available documents that appear in the printouts (ordered through the ERIC Document Reproduction Service, a one-microfiche document costs $.83).

C. Training and training updates for designated liaison and associated personnel (initial one-day training session by EPSIS personnel using tested EPSIS-developed training materials). Training can be individualized or conducted in small group sessions.

D. A copy of the Thesaurus of ERIC Descriptors, 7th edition (cost $9.95), bibliographies of resources on selected educational topics, EPSIS publicity materials and posters, and a bi-monthly liaison newsletter are supplied for liaisons' use.

E. For those institutions having compatible computer terminals, there is the possibility of participating in the EPSIS remote access project. Selected institutions will be allowed time on the EPSIS computer service subscription to conduct searches at their own terminals, for faster turnaround time and patron convenience. One-day training workshops will be conducted by EPSIS for interested institutions, as well as followup sessions. This year, remote access test locations are Niskayuna High School, St. Lawrence BOCES, University of Rochester Education Library, and Erie I BOCES.

F. Access to EPSIS-developed program and teacher developed materials database. For educators interested in contacting other districts conducting programs in similar areas, EPSIS has computerized information indicating where these programs are located, how they have been funded, what materials are available, and the persons to contact for further information. Also included are sources of funding, new legislation and unpublished tests.

G. Improved local decision-making processes. Studies undertaken by EPSIS have shown that information provided through computer searches has been instrumental in improving local decision-making and problem-solving by providing factual background for investing limited financial resources, etc.

H. Analysis of information needs specific to the service region. EPSIS does an in-depth study of the information requests it receives, and can prepare a statistical breakdown by service region of the requests for information generated by that geographic area, including types of users and purposes for which requests are made.

From this section of the paper one should conclude that an effective management and support structure exists in New York State for the delivery of ERIC services to the practitioner. Involvement, however, is voluntary on the part of the BOCES on behalf of its school district

clients. As late as spring 1978, 13 of the 44 BOCES had yet to initiate ERIC liaison service. Because staff time and willingness must be agreed to, with no state funding available to aid in the cost, a BOCES must weigh carefully its ability to undertake ERIC services. Nonetheless, an increasing number of the BOCES have implemented the system and are providing access to these vital educational resources for school district personnel.

PART II. A Regional Service Program.

The Oswego County BOCES has provided a direct ERIC liaison service to its component school districts for some nine years. Located in Mexico, New York, approximately 35 miles northwest of Syracuse, this BOCES services nearly 30,000 students and 1,800 teachers in the nine school districts of Oswego County. Primarily a rural setting with two small cities, the area is perhaps best known for its truly monumental snowfalls. Despite the harsh winters, the educational programs go on, and ERIC has not only been introduced here--but has a modest record of success!

Within the Curriculum Resource Center, the entire microfiche document collection is maintained and subscribed to on an annual basis. Indexes, equipment and staff necessary to on-site use are available as well. Thus, clients can journey to BOCES and have free use of the total system. Few do. Educators are simply too busy and too scheduled to avail themselves of any service--regardless of its merits--when it entails any burden.

Therefore, the Curriculum Resource Center has adopted techniques of promotion, training and service which are outreached to the local school:

- Building-level awareness workshops to acquaint teachers with ERIC and the ease of access via BOCES.
- Training sessions for school library media specialists to help them become the on-site consultant for helping their teachers and providing professional services and collections.
- Persuasion of school administrators that a modest investment (approximately $300) will allow access to ERIC's thousands of documents--all that is needed are indexes and a portable microfiche reader.
- Encouragement to purchase a microfiche reader/printer for the district as the demand for service increases. (BOCES equipment can be used until then.)
- On-going publicity regarding new and relevant items in ERIC utilizing the Center's regular newsletter, the CRC Newsreel.
- Preparation and dissemination of selective bibliographies for target audiences on key interest areas. (NOTE: For some three years the Oswego BOCES produced an SDI--selective dissemination of information--service for the entire state around such subjects as the open school, PPBS, teacher evaluation, environmental education, differentiated staffing, flexible scheduling and the like.
- Use of the Curriculum Resource Center Advisory Council as district-level promoters and contacts for ERIC service.
- Stimulation of local educators to contribute their own practical research or educational material for inclusion in ERIC.

The follow-up to our "marketing" efforts is to ensure the reliable, efficient ERIC service itself. This entails having the staff librarian available to work with clients on a one-to-one basis, usually by telephone, in negotiating the information for conducting a search. Based upon such discussion, a decision is made to either search the system manually using the in-house ERIC collection, or to write the search logic and transmit it to EPSIS for a computer run. In either case, the client receives an annotated listing of the documents and journal articles (using the Current Index to Journals in Education) appropriate to his/her need.

The next level of service is to deliver the documents or articles themselves upon the client's having reviewed the listing and requested those of interest. For ERIC documents, EPSIS is again contacted to supply the free microfiche copies, which are then forwarded to the client for permanent loan. For journal articles the New York State Interlibrary Loan (NYSILL) system, as coordinated by the State Library in Albany, is utilized in requesting copies of those items desired. The school library media specialist can be instrumental in providing the first-level NYSILL service.

The objective throughout these processes is to custom-design support for the educator. Teachers, for example, never have to leave their schools. Using the telephone and the BOCES courier services, information is easily transmitted to the recipients.

Timeliness of response is a consideration. The transactions to and from BOCES and EPSIS will average one week to ten days. Our educators have usually found this a satisfactory turnaround time in exchange for the fact that we do all the work for them. When an urgency prohibits

any delay, we opt to conduct the searches manually and on-site, following up with the client using our or a local school's ERIC collection, equipment and staff support.

Part of the training provided area-educators regarding ERIC services is their need to plan ahead. Increasingly we are seeing evidence of this happening. For example, when a school appoints a curriculum development committee one of their first efforts is likely to be a request for an ERIC search. Time is not a pressure at that point, and the usual process is adequate. To editorialize for a moment, it is my feeling that we media professionals are often the very ones who create the concern for short turnaround time by anticipating that the client must have the material tomorrow! At least with ERIC, we have not found this to be the situation, except in a few cases.

PART III. Users and Purposes of Use.

In sampling records of the Curriculum Resource Center, Oswego County BOCES, relative to requests for ERIC searches, it was found that a good variety of types of educators have used ERIC in the 1977-78 school year.

Included are:

-- teachers (of special education, art, adult basic education, reading, industrial arts, physical education, as well as general elementary and secondary classroom teachers)

-- administrators (principals, assistant principals, superintendents, assistant superintendents, school board members, interns)

-- specialists (guidance councilors, psychologists, librarians, curriculum coordinators, "Child Find" coordinators, teachers of the gifted and talented, school nurse teachers)

-- community agencies (Drug Abuse Center, Mental Health Center, Youth Employment Training Project, Campus School, Social Services)

The topics of their requests have been equally varied. For example, among them are: synectics, self-concept, language development/cultural deprivation, vocational adjustment, haptic perception, adult education for prisoners, readability and cloze, human/communications resources, curiosity, community art, psychological development, parent-teacher conference, uninterrupted sustained silent reading, speech disorders of the trainable mentally retarded, police science curriculum, education of exceptional children, commercial art curriculum guide, child care bibliography, psycholinguistics, vocational education curriculum evaluation, vocational education criterion reference test, vocational education individual modules, dyslexia, mental health curriculum, schools and senior citizens, spelling, radiation effects, divorce, death, gifted students: program and curriculum, list of American educators, auditory discriminatory testing, language expression/socializing/Negroes reading, teacher recruiting/selecting/interviewing,

teacher evaluation, self-concept and reading, physiological/neurological disorders and reading, games/simulations for elementary school teaching, parents of gifted students, third party consultation, evaluation counseling for vocational education, social studies and reading high achievers, house progress/house plans for secondary schools, adult basic education evaluation and social effects, sex/family life education, proctor brain theory, computer assisted instruction, school/community surveys, work attitudes/class attendance, characteristics of students using drugs, marijuana education, funding adult literacy, juvenile delinquency, aptitude vs. achievement, self control/student discipline, health education curriculum, and affective curriculum for the emotionally disturbed.

Information received through ERIC searches on the above topics have varied and discrete uses. In some cases the data is supportive of graduate studies, while other quests are motivated by in-school committee work, inservice programs, curriculum development projects, classroom research and problem solving, and basic curiosity or creativity. In further instances, the data received responds to school and community issues, long range planning and projection, evaluation concerns, grantsmanship, educational trends, service to special populations, and general directions for growth or change. The beauty of ERIC is its ability to address universal and specialized concerns of educators and lay persons alike.

Conclusion.

ERIC is designed to serve people. But left to itself, the system is mechanical and impersonal. It is not enough to merely provide the

data base and technology for the user. Instead, it takes persons who are committed to the need for and value of educational research and who are willing to exert steady and creative leadership toward ERIC awareness and use. Patience and perseverance are key factors, but given a planned, systematic approach to promotion and delivery of service, ERIC--like the schoolboy Eric--steadily improves in results.

APPENDIX

Background Information on BOCES.

To understand BOCES services, one is first advised to learn a few facts about overall BOCES history and operations. A quick method for gaining pertinent details is to read a five-page document produced in 1974 by the League of Women Voters, BOCES Study Kit.[1] The following quotations from that pamphlet represent some of the significant facts about BOCES.

> The basis for Boards of Cooperative Educational Services (BOCES) was established in 1948 by the passage of Section 1958 of the Education Law that permitted school districts to combine their resources and share needed services and programs that could be performed more effectively and economically together than by a single district alone.
>
> There are currently 44 BOCES in New York State. They range in size, as measured by enrollment in member districts, from just over 6,000 to above 340,000 with the median size, as of late 1970, being 26,182.
>
> Any local school district whose population is under 125,000 is eligible to become a component. All districts under the jurisdiction of the District Superintendent which do not have their own superintendents are automatically components of BOCES. The Big Five cities[2] are by law excluded from BOCES. [Currently all but 16 of the 738 school districts in New York State are component members of a BOCES.]
>
> BOCES board members are elected at an annual meeting by members of the Boards of Education of the component districts for rotating five year terms. The number of members of the board ranges from five to fifteen, as authorized by the Commissioner.
>
> The chief executive officer of BOCES is the District Superintendent. ...The District Superintendent is appointed by the BOCES Board subject to the approval of the Commissioner of Education.

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[1] BOCES Study Kit, a Fact Sheet on Structure, Operation and Financing of Cooperative Educational Services. State Board Report, September 1974. (Available from the League of Women Voters of New York State, 817 Broadway, New York, Price: $.20)

[2] Buffalo, Rochester, Syracuse, Yonkers, and New York City.

> BOCES operations basically consist...of the furnishing, at the request of component school districts, of specialized instructional services such as special classes for handicapped children, occupational education, and support services like data processing, library and book purchasing, and audio-visual equipment development and deployment. By law, a BOCES has almost unlimited flexibility in the programs and services it offers, provided that a minimum of two component districts request a service and that approval is granted by the Commissioner of Education. ...
>
> A BOCES has no money of its own nor the taxing authority to raise it. Program costs are financed through service charges to the school districts for those services which that district requests and contracts for. Administrative costs are shared by all component districts regardless of how many services they purchase for BOCES. The component districts are thus charged for BOCES total administrative and program expenditures and are, in turn, reimbursed by the State through BOCES, according to the formula for BOCES aid. ...
>
> BOCES is an applicant for certain types of federal aid and often receives money directly from Washington or through the State Education Department.

The above statements cite some of the unique characteristics of BOCES. One further area, however, should be elaborated upon for developing basic knowledge. BOCES services are performed upon the request of two or more (i.e., the cooperative element) component districts and according to an annual contractual agreement between the BOCES and each participating district. Such contracts expire every June 30, at which time new or continuing service requests can be effected via new contracts. The co-service agreements, as the contracts are termed, must be approved by the State Education Department in advance. The impact of this method of operation results in annual accountability for the cost, quality, and need for a BOCES service.

BOCES media and information service programs, as regional-level services, primarily exist to supplement collections and services not available and/or appropriate to a building-level or district-level center.

The BOCES media service will typically be called an educational communications program or a curriculum resource center. The primary client groups for service are the teaching staffs of the component schools; services will be extended in particular cases to administrators, local community groups, organizations and agencies, higher education personnel including students of teacher preparation programs, and individual residents of the area served. The ultimate beneficiaries of the service program, however, are intended to be the students enrolled in public school systems.

A number of basic collections and services will be common among BOCES media programs. Access to special collections, and extensive 16mm film libraries will be available. Other collections at the regional level will include media kits, microforms, sets of filmstrips, slides and transparencies, art prints and study prints, sound and silent 8mm loops, realia, models, specimens and three-dimensional materials. Audio and video tape forms are also among the significant resources made available. Living materials, particularly animals and plant life, are circulated as well.

In support of the use of the various media forms, most BOCES programs will provide the technical services for repairing and maintaining the audiovisual equipment owned by the participating schools. Further, as regards instructional television, full assistance may be provided in areas of developing a school's capability for off-air reception and distribution, delayed broadcasting use, and closed-circuit programming.

Design, development, and production of original software programs or media items with the assistance of BOCES frequently involves the teacher-client, and the selection of the best medium format is made in

response to the student learning style, the teaching method, and the curriculum objectives. Formats range from charts, posters, transparencies, filmstrips, slides, audio and video tapes to entire original television programs. Through drymount techniques, lamination, copying, and duplication services, materials can be preserved and improved for use.

A number of BOCES programs offer special professional collections and services for staff development. In-service instruction for educators, often conducted by leading authorities and consultants, will be given in areas that span the curriculum, student needs and abilities, educational priorities, teaching techniques, and related concerns of educators. Research and reference services for educators are conducted, with the ERIC database commonly being a primary access system. Textbook services, microfilming of records, instructional computer services, and bibliographic and searching assistance may be parts of the BOCES operation.

One of the vital offerings lies increasingly with consultation and program development. The BOCES media program frequently can provide highly talented staff specialists to work with schools in local library media program production and evaluation, facilities use and planning, staff selection and training, budget preparation, proposal writing, and such related concerns. In these areas the BOCES can provide a bridge between the schools and the State Education Department, or other community and State agencies. Often the posture of the BOCES here is that of facilitator, or catalyst.

While some BOCES media centers have existed for a 15- to 20-year period and others are only a few years into operation, nearly every

eligible school district in New York State now has this level of supplementary media service available to it. Increasingly the school districts are contracting for these programs, and teachers are depending on the expanded resources available through BOCES.

Current educational thinking favors regional approaches for extending and maximizing available resources. The sharing among schools as promoted by a BOCES and the stimulus for desired innovation and change are factors to be recognized and endorsed.

"THE LITTLE GREY CELLS, THE LITTLE BLACK CARDS": AN APPROACH TO ERIC MICROFICHE

Lewis Saks
Director, Media Center
East Detroit Public Schools

The school house is an interesting institution when put up against a particular "time line" measurement. In 1978, educational media is part and parcel of the teaching/learning enterprise--and yet, as this report indicates, the schools are essentially in the very beginning stages of phasing in the best of educational innovation in terms of electronic and photographic information resources.

One of these innovations, microforms, has been surfacing in education for a number of years like bubbles in a champagne glass. Although the microform "bubbles" have sometimes burst, some observers would now call the promise of microminiaturization a promise whose time has come. Microfiche, because of its utility and functionality, might even be likened to Hercule Poirot's "little grey cells"; finding information of a non-criminal nature is as much of a detective process as is Poirot's style of deduction, and "the little black cards" could be one way of talking about the world of microfiche, microminiaturization, and a whole new way of doing business. ERIC is a big part of this promise.

It can be readily seen from the setting in which the East Detroit schools operate, namely metropolitan greater Detroit, that the opportunity to relate to the total information "establishment" is rife with possibilities, and, against a tradition of library and audiovisual services which emerged in the post-war era, members of the media center staff have

maintained a strong interest in innovation and new formats, keeping themselves in a "readiness" posture for such options as ERIC can increasingly provide.

Outlook

Microfiche seems to be having a strange odyssey in public schools. Trends in education tend to be faddish and modish, but teaching in 1978 is still more of the 19th century than turned towards the 21st.

And yet, any observer of the school scene since World War II has to testify with conviction that the schools have moved. "Hardware" and "software," "media" and "multi-media," and "big-screens" and "little screens" dot and animate classrooms everywhere across the land. Audio-visual specialists have been through 16mm sound filmstrips, the opaque projector capability, the wire recorder, and videotape in waves of innovation, each medium thrust upon the American scene by a combination of audiovisual industry and the university media specialist/teacher trainers.

One of the first great efforts at microminiaturization came out of the British Museum in World War II to protect its holdings during the blitz. Thus was born in earnest microfilm in the academy. The commercial name was University Microfilms; the innovator, Eugene Power; the American base, Ann Arbor, Michigan. Now all of the mile-high piles of back issues of every magazine are successfully re-cycled on the little spools of film in every school library that can afford it and chooses to so commit its budget.

Then comes ERIC, the encyclopedic and behemoth-like apparatus of the USOE, pinning down as it does the academic output of our colleges and universities.

This paper will confine itself to an inquiry about microfiche use in this medium size school system, which is both traditional in its roots and at the forefront in its concern for improvement of teaching techniques.

The Role of Microfiche in East Detroit

With the rebuilding of the library at East Detroit High School, which had burned in 1972, that center for a 3,000 student population came to involve fiche services addressed to student needs, e.g., the News Bank monthly service. Librarian Betty Lindberg has reported continuing interest on the part of high school students in the fiche services available to help them with their assignments. In fact, she indicates, the "magic" of the reader technology seems to mesmerize some students and keep them pursuing information where finding it directly in a magazine on the library shelf has less "glamour."

However, the treasures in the ERIC resources are essentially mined by teachers and administrators for their professional growth. While school staff confronted with specific situations--e.g., the conversion of elementary schools to middle schools--do call upon ERIC for the latest update, in East Detroit the groundswell of interest in microfiche characteristically reflects course assignments at universities and teacher response to their probe of some aspect of education "for credit."

Peggy Ascenzo, cataloger in the media center, adds another dimension to the matrix that microforms and ERIC represent. "I see our in-house role as being of strong support and immediate back-up to the questing teacher," she says. "We should help the academic inquiry for

the college course assignments. But we also have the day-to-day inquiry on information for classroom management, what's new in this and that area. Then we should help with translation of trends of local dissemination interest. These should be our role now and even more so in the future."

Access to ERIC

The media center in East Detroit subscribes to the two ERIC indexes, Resources in Education (RIE) and Current Index to Journals in Education (CIJE), for teachers to dip into and find out what is new in educational information offerings. Interested teachers can then follow up by going to the Wayne State University Library for the actual fiche order or hard copy of the material they are seeking. Recently, the Macomb County Intermediate School District Media Center (REMC) has taken on equivalent status as an ERIC source, and teachers increasingly go to Mt. Clemens now to find the fiche they are interested in. In many cases, the REMC service and librarian Dick Palmer's good offices have facilitated the process. The Wayne State Library also reports a "growth curve" in fiche use.

Dick Palmer, the REMC library specialist, assesses the situation in Macomb County and, particularly, the East Detroit Schools: "East Detroit is a healthy grass roots situation that is not standing still when it comes to moving into microforms. The ERIC system finds its widest fulfillment in our offices on the computer search capability, but it is the localities who start the process off with felt needs and down-to-earth inquiries."

Palmer continues: "In many ways, the attention of the media center in East Detroit to the ERIC system is ahead of other localities. Moreover, by relating to our computer capabilities, the questing teachers from that system are able to find extended answers. East Detroit's activity in ERIC searching gives us an additional reason for being part of a countywide hook-up that makes more information available to teachers."

Fred Acerri, Palmer's counterpart in the Wayne County Intermediate School System Information Services Department, is delighted to find materials in ERIC that "relate to the classroom curriculum needs in a very practical, hands-on, down-to-earth manner." He spends 60 per cent of his time at the Intermediate School District, the remaining 40 per cent at Wayne State University processing ERIC searches, and is enthusiastic about the availability of basic papers on simple "how-to-do-it" classroom activities available from ERIC. "Curriculum know-how in the practical sense in the ERIC system is one of the strongest sources," he says.

The Director of the Education Library at Wayne State University, Ted Manheim, takes a mature approach to ERIC services. "We mount searches all the time," he reports, "going from fiche to fiche copy and, of course, hard copies as well as the computer service." Manheim helps fit ERIC into the total array of resources for investigators: "Not only does ERIC represent a large part of what is available, but we advise doctoral candidates to review those sources unreported in ERIC, e.g., Psychological Abstracts." He also endorses the use of fiche in localities, pointing out that Acerri acts as "a specialist in residence here [serving] teacher needs brought to his other office at the Intermediate School District in Wayne, Michigan and then processed at the University."

The Gilmore Report

A survey of East Detroit teachers vis-a-vis their awareness of microfiche, ERIC, and their plans, if any, for that "little black card" was conducted in the fall of 1977 by Pat Gilmore, an English teacher at East Detroit's Kelly Junior High School who is studying for a Ph.D. in Curriculum at Wayne State University. In reporting her project in educational research, she has not only analyzed her statistical findings on ERIC's identity in East Detroit, but her own impressions of ERIC are reported via an informal analysis and log of her experiences with the system as it helped her academic work at Wayne State.

The survey form went to 511 professional members of the East Detroit schools, of whom 150 (29%) responded to her inquiry. She writes:

> Sixty-seven (45%) of those who responded first heard of ERIC through this survey. I found it interesting that of this group, 42 (62%) had taken a formal education class within the last five years. I had expected that everyone having taken such a class in that time would have been informed of ERIC.
>
> Of the 83 (55%) that had heard of ERIC before the survey, 42 had heard of it through a formal class taken within the last five years. Of these 42 that had heard of ERIC through an education class, 25 (59%) had made an ERIC search, 29 (69%) had read ERIC fiches, and 20 (48%) had obtained a journal article through ERIC. I think this is high utilization of a research tool with which people have just become familiar.
>
> I was surprised at the number of teachers who had previously heard of ERIC. But I feel strongly that professional standards and teaching skills would be vastly improved if it were 100% familiarity. The word familiarity is key here because I am sure that any teacher once shown the wealth of materials available through ERIC would immediately and continuously utilize it.

Gilmore reinforces her perceptions of ERIC with a specific anecdotal recital of experience in her search for material on "teacher competency

studies." Zeroing in on the "interaction process analysis" field, an outgrowth of work by Ned Flanders, she reports that she found 1009 articles on this topic with dates between January 1970 and April 1978 in the ERIC database. She then counterpointed her ERIC inquiry by going into H. W. Wilson's Education Index. "I found 240 articles in Wilson over the same period of time," she reports, pointing out that the "unpublished material factor" has to be taken into account.

> Though impressed by this numerical evidence, I began to wonder about quality. After all, when we are acquainted with a journal, we know the degree of scholarship to expect. I don't give the same credence to an article in The Weekly Reader as to an article on the same topic in History Today. But with the thousands of articles going into ERIC, who edits and establishes standards? I still don't know the answers, but if the articles I examined on the Delphi are typical, I think the material is on fiche (ED) rather than in journals (EJ) for two major reasons:
>
> a. The study is too specialized to be of general interest, and/or
> b. Journals have definite space limitations. Or it may be as simple as the author did not submit the manuscript for publication.

As of this writing, there are teachers in East Detroit schools who are unaware of ERIC, and there are bona fide users. Once teachers get the "feel" of ERIC resources, they seem to gravitate to an as modern and up-to-date approach to ERIC as they can find. This means going from manual searching to the place where they can find a quick computer search. Such is the report of Maureen Toutant, special education teacher in East Detroit, one of the respondents to the survey.

> I have just finished my Master's Degree at Wayne State University after an eight year absence from school. I found that the research techniques have changed tremendously since that time. Mrs. Ascenzo introduced me to the ERIC system, which had made one of the biggest changes in research techniques. I was able to obtain the ERIC catalogues from the East Detroit Media Center, and did a hand search. I found this a very tedious and time consuming task.

I was helped considerably by Mr. Dick Palmer of the M.I.S.D. Beale Library. He was able to do a computer search for me, and get abstracts from both ERIC and the Council for Exceptional Children Clearinghouse. Many of the articles were available on microfilm at the Beale Library. They have a micro-copier which saved me a great deal of time.

Much of the material on my subject, which was hyperactivity, has been written by those in the medical profession in such journals as The American Journal of Orthopsychiatry and The Journal of Pediatrics. Mr. Palmer was able to obtain these articles from several hospital libraries. I also received microfilmed articles from the University of Michigan and Wayne State University Medical School.

Many fields overlap education especially in the field of special education. I found the materials in ERIC a little narrow for my use; however, it did get me started in the right direction in my research.*

Conclusions

The need for information sources for teachers is unending. Education's agenda today is very much subject to change, to question, and to renewal. Staff development begins with an easy access to material in a steady flow, and the ERIC system, as now constituted, puts the teacher in the "researcher's seat."

And yet, while ERIC can be a major key to filling information needs, it can also be a source of frustration and some fulmination in the schoolhouse--the need is at hand for a back up service to assist each teacher in the customized pursuit of this entry or that notation which will yield the knowledge desired.

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*Letter from Maureen Toutant to the author.